

ABSTRACT OF THE DISCLOSURE

It is an object of this invention to provide an apparatus that selects and specifies an optimal operating method for plant equipment while estimating risk-cost that
 5 relates to damage, performance deterioration, and functional stoppage, of the plant equipment, and comparing the risk-cost with profit gained from operation.

To achieve the above objects, the apparatus comprises an operation request input unit that inputs
 10 information relating to operation request items of the plant equipment; an operating conditions setting unit that converts operation request input information, input by the operation request input unit, to operating parameters; an operation history creation unit that creates an operation
 15 history by chronologically processing the operating parameters, converted by the operating conditions setting unit, based on input from an operation monitoring unit that monitors operating states of the plant equipment; a breakdown statistics database that stores an event tree of
 20 the plant equipment in correlation with degrees of unreliability relating to breakdown events; an event simulator that calculates the degree of unreliability corresponding to the operating parameters, based on the information in the breakdown statistics database, the
 25 operation request information, and the operation history information, and in compliance with the event tree of the plant equipment; a risk-cost calculation unit that calculates risk-cost by determining the aggregate product of the degrees of unreliability and restoration costs in compliance
 30 with the event tree; an operating method determination unit that determines whether operating conditions are suitable by comparing the risk-cost with profit that is expected to be gained by continuing operation; and an operating method specification unit that specifies specific
 35 operation conditions for the plant equipment in accordance

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with the operating method determined by the operating
method determination unit.

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